



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,266	07/09/2003	Yoshihiro Ikawa	10873.1259US01	1693
23552	7590	12/30/2005	EXAMINER	
MERCHANT & GOULD PC			GOMA, TAWFIK A	
P.O. BOX 2903			ART UNIT	
MINNEAPOLIS, MN 55402-0903			PAPER NUMBER	

2653

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/616,266	Applicant(s) IKAWA ET AL.	
	Examiner Tawfik Goma	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (figs. 6-7 and page 1) in view of Shibata et al (US Patent 5657172).

Regarding claim 1, Applicant's admitted prior art discloses an objective lens driving device comprising (par. 4 line 1): an objective lens for focusing a light beam on a disk (par. 4 line 2); a lens holder for holding the objective lens (52, fig. 6); a support for supporting the lens holder with respect to a fixing portion in a manner translatable in a focusing direction and a tracking direction and rotatable in a radial tilting direction (par. 006); and a driving system for driving the lens holder along three axes of the focusing direction, the tracking direction and the radial tilting direction (par. 009 lines 12-14 and par. 010 and par. 011), the driving system comprising two focusing coils that are each wound in a substantially rectangular toroidal shape around a winding axis parallel with an optical axis direction of the objective lens (54L, 54R, fig. 6), a tracking coil that is wound around a winding axis parallel with a circumferential direction of the

Art Unit: 2653

disk and attached to outer surfaces of the focusing coils (55, fig. 6), a first magnet that has a magnetic pole direction parallel with the circumferential direction of the disk and is arranged inside one of the focusing coils (58, fig. 7), a second magnet that has a magnetic pole direction opposite to that of the first magnet and is arranged inside the other focusing coil (60, fig. 7), a third magnet and a fourth magnet that are arranged facing the first magnet and the second magnet respectively while forming a magnetic gap such that the tracking coil and the focusing coils are located in the magnetic gap (59, 61, fig. 7), a first yoke that is located outside the magnetic gap and holds the first magnet (56a, fig. 7), a second yoke that is located outside the magnetic gap and holds the second magnet (57a, fig. 7). Applicant's admitted prior art fails to disclose a bridging yoke for connecting an open end of the first yoke and an open end of the second yoke. In the same field of endeavor, Shibata et al (US Patent 5657172) discloses a bridge yoke (6, fig. 1 and 36, fig. 10) that connects the open ends of the first and second yokes (col. 2 lines 49-58 and col. 7 lines 36-41). It would have been obvious to one of ordinary skill in the art to modify the objective lens driving device disclosed by applicant's admitted prior art with the bridge yoke as taught by Shibata. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide a bridge yoke attached to open ends of the magnet support yokes in order to limit the flux leakage (col. 6 lines 37-43 of Ishibata)

Regarding claim 2, Applicant's admitted prior art in view of Ishibata discloses everything claimed as applied above. Applicant's admitted prior art further discloses a

Art Unit: 2653

third yoke that is outside the magnetic gap for holding the third and the fourth magnets (56b, 57b, fig. 7).

Regarding claims 2 and 3, Applicant's admitted prior art in view of Ishibata discloses everything claimed as applied above. Applicant's admitted prior art fails to disclose wherein the third and fourth magnets are a single two pole magnetized magnet. In the same field of endeavor, Ishibata discloses wherein a single permanent magnet (32, fig. 10) that faces the first and second magnet while forming a magnetic gap such that the tracking and the focusing coils (12, fig. 10) are located in the magnetic gap. It is known that all permanent magnets are two pole magnets. Ishibata further discloses a yoke (31, fig. 10) that supports the permanent magnet. It would have been obvious to one of ordinary skill in the art to modify the split third and fourth magnets disclosed by applicant's admitted prior art with a single magnet as taught by Ishibata. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide a single magnet for the driving device taught by applicant's admitted prior art in order to make the device more compact.

Regarding claim 4, Applicant's admitted prior art in view of Ishibata discloses everything claimed as applied above. Applicant's admitted prior art further discloses an apparatus for the driving device in claim 1 (fig. 6 and par. 4 lines 6-10).

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (figs. 6-7 and page 1) in view of Shibata et al (US Patent 5657172) and further in view of Kawano (US Patent 6570720).

Regarding claims 2 and 3, Applicant's admitted prior art in view of Ishibata disclose everything claimed as applied above (see claim 1). Applicant's admitted prior art in view of Ishibata further discloses where the third and fourth magnets are a single two-pole magnet and a yoke for supporting the single magnet (see claim rejection above). Applicant's admitted prior art also discloses a third and fourth magnet that are oppositely polarized (59, 61, fig. 7). Applicant's admitted art in view of Ishibata does not disclose wherein the oppositely polarized third and fourth magnets are a single magnet. In the same field of endeavor, Kawano (US Patent 6570720) discloses an optical lens driving mechanism where a single magnet (5, fig. 2) has oppositely polarized sections and a yoke (7, fig. 2) supports the single magnet (5). It would have been obvious to one of ordinary skill in the art to modify the driving mechanism taught by Applicant's admitted prior art in view of Ishibata with a single magnet with oppositely polarized section as taught by Kawano. The rationale is as follows: One of ordinary skill in the art would have been motivated to modify the split third and fourth oppositely polarized magnets taught by Applicant's admitted prior art with a single magnet with oppositely polarized sections as taught by Kawano as a design choice modification in order to make the driving mechanism more compact.


Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Choi (US patent 6788638) discloses an optical pickup actuator having a magnetic flux controlling member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tawfik Goma
12/23/2005


Thang N. Tran
Primary Examiner
12/23/2005